

TYPES OF ECKLON'S 'TOPOGRAPHISCHES VERZEICHNISS' IN THE SWEDISH MUSEUM OF NATURAL HISTORY IN STOCKHOLM

B. NORDENSTAM

(*Swedish Museum of Natural History, Stockholm*)

ABSTRACT

C. F. Ecklon's 'Topographisches Verzeichniss', published in 1827, is a list of South African petaloid monocots, many of which were grown in the 1820's by Ecklon in a botanical garden on the northern slopes of Table Mountain near Cape Town. Herbarium specimens associated with this publication are located in the Swedish Museum of Natural History in Stockholm (S). The majority of Ecklon's new names are *nomina nuda*. An annotated list of these is provided. About 44 species may be regarded as validly published. No less than 32 of these are typified by specimens in Stockholm. Some nomenclatural changes result. Thus *Romulea parviflora* Eckl. has priority over *R. obscura* Klatt, and *Ixia lutea* Eckl. takes precedence over *I. conferta* Foster. A new combination is made, viz. *Ixia lutea* Eckl. var. *ovata* (Andr.) B. Nord. (syn. *I. conferta* Foster var. *conferta*).

UITTREKSEL

TIPES VAN ECKLON SE 'TOPOGRAPHISCHES VERZEICHNISS' IN DIE SWEEDSE NATUURKUNDIGE MUSEUM IN STOCKHOLM.
C. F. Ecklon se 'Topographisches Verzeichniss' in 1827 gepubliseer is 'n lys van Suid-Afrikaanse petaloïde censaadlobbiges, waarvan hy heelwat in 1820 in 'n botaniese tuin teen die Noordelike hange van Tafelberg gekweek het. Herbarium eksemplare wat met hierdie publikasie verbind was word in die Sweedse Natuurkundige Museum in Stockholm (S) gevind. Die meerderheid van Ecklon se nuwe name is *nomina nuda*. 'n Geannoteerde lys van hierdie name word voorsien. Ongeveer 44 soorte word as wettig gepubliseerd beskou en nie minder as 32 van hierdie soorte word deur eksemplare in Stockholm verteenwoordig. Sommige nomenklatuur veranderings word gedoen. So geniet *Romulea parviflora* Eckl. prioriteit oor *R. obscura* Klatt en *Ixia lutea* Eckl. bo *I. conferta* Foster. 'n Nuwe kombinasie word gemaak: *Ixia lutea* Eckl. var. *ovata* (Andr.) B. Nord. (Syn *I. conferta* Foster var. *conferta*).

INTRODUCTION

Christian Frederik (or Friedrich) Ecklon (1795-1868) is justly famed for his extensive plant collections in South Africa. Ecklon, his friend C. L. P. Zeyher and J. F. Drège made up "the lynx-eyed trio" in MacOwan's exposé of botanical collectors at the Cape (MacOwan, 1887).

Ecklon did not publish much, apart from his joint publications with Zeyher (Ecklon & Zeyher, 1834-37). However, the intention of the present paper is to draw attention to his publication entitled 'Topographisches Verzeichniss der Pflanzensammlung von C. F. Ecklon'. This rare and somewhat overlooked

Accepted for publication 28th June, 1972.

booklet was printed in Esslingen in 1827. It contains a list of altogether 475 South African species of "Coronariae" and "Ensatae", i.e. petaloid monocotyledons (Liliaceae, Iridaceae and related families). About 165 of these species were given new names by Ecklon, who could not identify them with earlier described species. Only one species, viz. *Watsonia natalensis* Eckl., was provided with a complete description in German as well as a Latin diagnosis. The majority of Ecklon's new names are clearly nomina nuda, but in many cases he added brief remarks on flower colour etc.

About 50 of Ecklon's new names are accompanied by such descriptive notes, varying in length from laconic remarks like "Blumen gelb" for *Ixia angustifolia* Eckl. to more exhaustive descriptions like that of *Ixia lutea* Eckl. (see p. 284). Both these names were dismissed as nomina nuda by Lewis (1962). Other authors have adopted some of Ecklon's species, but there has been no consistency—not even with the same author, e.g. Baker (1878, 1896)—in the criteria for retention or rejection of the names.

In order to avoid arbitrary and inconsistent treatment of Ecklon's species, some principle should be adopted in deciding which names are validly published and which are not. One of the primary requirements for valid publication in the sense of the Code is the presence of a description or diagnosis (Art. 32). A diagnosis is defined as "a statement of that which in the opinion of its author distinguishes the taxon from others" (footnote to Art. 32).

Adopting the Code's definition of a diagnosis as a guiding principle, I have ventured to judge which of Ecklon's species should be regarded as validly published. In other words, the criterion applied has been whether the descriptive phrase clearly distinguishes the taxon from others or not. E.g., "Blumen blau" is not sufficient as a diagnosis of *Viesusseuxia Brehmii* Eckl., since this is not the only blue-flowered species of that genus. Exactly the same descriptive note is given for *V. geniculata* and *V. tabularis* (Ecklon, 1827: 12–13).

On the other hand, *Geissorhiza candida* Eckl. (op. cit.: 21) may be regarded as validly published, although it is merely placed without further description under the heading "Weisse Blumen"—being the only white-flowered species known at the time.

As a result of these considerations, 44 of Ecklon's new species may be regarded as validly published. In several cases it has been difficult to judge on the adequacy of a descriptive phrase, and I am aware that other workers may arrive at diverging opinions. The validly published species are enumerated below, with comments on typification etc.

One of the main reasons for the general disregard of Ecklon's new names has no doubt been the absence of type specimens. This obstacle to an understanding of Ecklon's taxa can now be largely removed. In the herbarium of the Swedish Museum of Natural History, Stockholm (S), I have found rich material associ-

ated with Ecklon's publication. As a matter of fact, most of the collections enumerated by Ecklon are represented in S, and no less than 32 of the validly published new species can now be typified by holo- or lectotypes in this herbarium. These types have been photographed, and one set of copies will be deposited in the National Herbarium, Pretoria (PRE), and another set at Kew (K).

Some herbarium labels in Ecklon's handwriting are shown in Fig. 1. The abbreviations "A.d.b.G." and "E H B" occur on many labels and call for some comments. The former abbreviation frequently appears also in Ecklon's 'Verzeichniss' and stands for "Aus dem botanischen Garten". Similarly, "E H B" no doubt stands for "Ex Horto Botanico". The garden referred to belonged to Mr. J. A. Joubert, a Cape Town lawyer, who granted Ecklon the use of part of his property on the northern slopes of Table Mountain. This botanical garden of the 1820's is of interest as an early forerunner to the famous National Botanic Gardens, Kirstenbosch.

A sketch map of the botanical garden is attached to Ecklon's publication. The layout shows four main squares, each geometrically divided into 196 squares, one for each species. Three main squares were devoted to monocots, viz. the plants treated in Ecklon's book, and a few ferns. The fourth square housed various succulents, mainly stapeliads, 'mesems', and Crassulas. Between these squares lay a central area with palms, cycads, Strelitzias and Euphorbias. The garden was surrounded by hedges of oak and, in parts, Hydrangeas. It may be estimated that this botanical garden contained about 1 000 species of indigenous South African plants.

Apart from plants brought into cultivation, Ecklon also enumerated spontaneous collections, mainly made by himself in the southwestern Cape. Other collectors mentioned are Beil, C. H. Bergius, Brehm, Buchenröder, Fraenkel, Pallas, Mund, Ludwig, and Zeyher. C. H. Bergius must not be confused with the Swede, J. P. Bergius, who wrote on Cape plants, but never visited South Africa. Carolus Henricus (Karl Heinrich) Bergius was a German medical student, who collected at the Cape in the 1810's and died prematurely there in 1818.

For the sake of completeness it should be mentioned, that a few of the plants in Ecklon's 'Verzeichniss' had been grown in other contemporaneous Cape Town gardens, viz. those of Ludwig, Villet and J. J. B. Smuts.

ECKLON'S VALIDLY PUBLISHED SPECIES AND THEIR TYPIFICATION

Gethyllis rosea Eckl. (p. 4)

Descr.: "Die Blumen sind rosenroth und die ganze Pflanze viel kleiner als die übrigen".

Orig. coll. in S: "Am Fusse des Baviansberges 2te Höhe bei Gnadenthal. Nov. 1825" (Holotype).

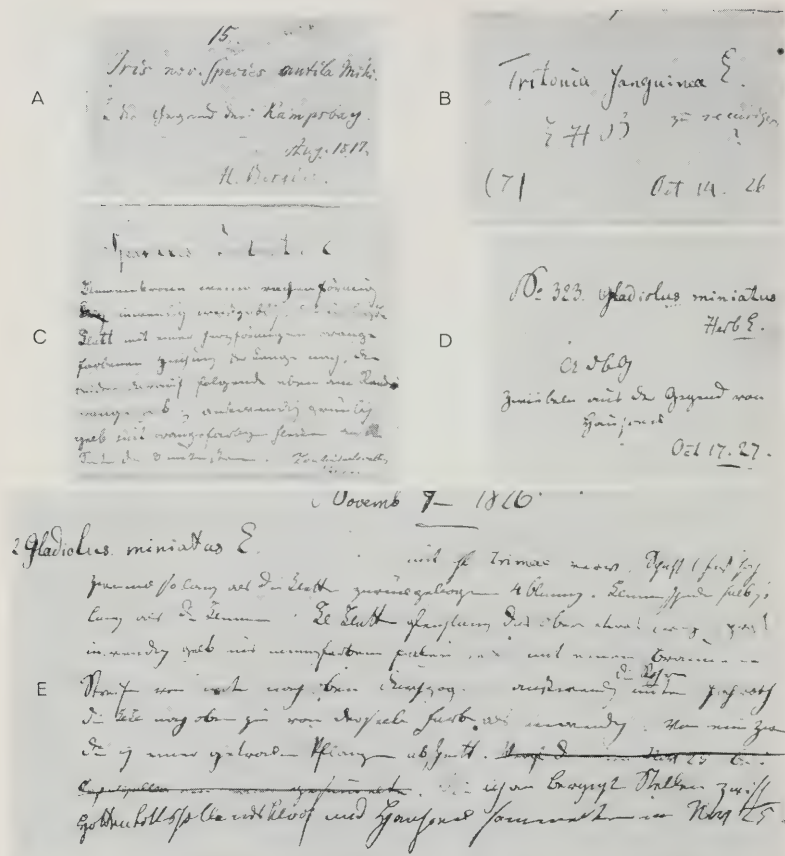


FIG. 1.

Labels and annotations from the herbarium of the Museum of Natural History, Stockholm, showing the handwritings of C. H. Bergius (A) and C. F. Ecklon (B—E). The designations "E H B" and "A d b G" refer to the garden of Mr. J. A. Joubert, where Ecklon grew his plants. See further in the text.

A: From original collection of *Viesseuxia mutila* C. H. Bergius ex Eckl.

B: From holotype of *Tritonia sanguinea* Eckl.

C: From sheet of "*Sparaxis Joubertii* Eckl.", a manuscript name, which has caused some later confusion. It was collected by Miss H. Joubert in Zoetendaalsvlei in the old District of Caledon (but now in Bredasdorp Division). When naming the plant, Ecklon perhaps rather wanted to commemorate his patron, Mr. J. A. Joubert, than the collector—hence the masculine termination of the epithet. In the lower right-hand corner the locality has been added by O. W. Sonder. This specimen is the source of later citations like *S. "Joubertii* Lodd.", "*Jaubertii* Lodd." and probably also "*thoubertii* Hort." (cf. Goldblatt, 1969).

D, E: From the type sheet of *Gladiolus miniatus* Eckl.

Baker in "Flora capensis" (Baker, 1896: 194) mentioned this as a form of *G. spiralis* L.f. Obviously he had not examined the type, which has leaves densely covered with bristles and in my opinion belongs to *G. villosa* L.f.

Vieusseuxia graminifolia Eckl. (p. 11)

Descr.: "Blumenblätter graulich".

Orig. coll. in S: "Von Groene Berg. E H B. Sept. 29.-26" (Holotype).

The laconic diagnosis is only hesitatingly accepted as sufficient for valid publication, but no other species of the genus was described as having the same peculiar flower colour.

The sheet in S bears six specimens mounted together and also the label of Zeyher no. 1068. Apparently two collections are mixed. It may be possible to sort them out on comparison with duplicates of the latter collection.

The species was by Baker (1896: 17) cited as a synonym of *Moraea polyanthos* L.f., but Goldblatt in 1971 determined the type sheet to *M. vegeta* L. (better known as *M. juncea* sensu Ker).

Vieusseuxia mutila C. H. Bergius ex Eckl. (p. 12)

Descr.: "Blumen blassblau".

Orig. coll. in S: (i) "In der Gegend der Kampsbay. Aug. 1817. C. H. Bergius" (cf. Fig. 1); (ii) "Zwischen Gebüsch der 2te Höhe am Löwenrücken. Sept. 8.-26"; (iii) "Am Löwenrücken 2 Höhe. August. Ded. Ecklon".

The collections (i) and (ii) are mounted together on one sheet. (iii) is perhaps the third collection mentioned in Ecklon's list, although the label is then re-written.

The correct name of the taxon seems to be *Moraea tripetala* (L.f.) Ker var. *mutila* (Licht. ex Roemer & Schultes) Baker (1896: 23; cf. also Lewis, 1950: 230), based on *Iris mutila* Licht. ex Roemer & Schultes (1817).

Vieusseuxia pulchra Eckl. (p. 13)

Descr.: "Blumen dunkler blau als die vorige" (i.e. *V. setacea* (Thunb.) Eckl.).

Orig. coll. in S: "Hottentottshollandskloof am Gipfel. 4te Höhe. Nov. 25" (Holotype).

Not cited by Baker in 'Flora capensis'. The type specimen belongs to *Moraea tripetala* (L.f.) Ker (det. P. Goldblatt).

Vieusseuxia curvata Eckl. (p. 13)

Descr.: "Blumen orangegelb".

Orig. coll. in S: "Am Weinberge bei Witteboome. Sept. 15.-26" (Holotype).

Not cited in 'Flora capensis'. The specimen is very poor and perhaps insufficient for a positive identification. It seems advisable to dismiss the name as a nomen nudum.)

Moraea minor Eckl. (p. 15)

Descr.: "Mit *M. aurantiaca* verwandt. Blumen orangefarben, Blätter kleiner".

Orig. coll. in S: "Sandige Stellen am Weinberge auf der östlichen Seite des Tafelberges. Sept. 15.-26" (Holotype).

Not cited in 'Flora capensis'. It is possibly a species of *Homeria* (perhaps *H. collina* (Thunb.) Vent., according to P. Goldblatt).

(*Moraea similis* Eckl. (p. 15)

Descr.: "Mit *M. collina* verwandt. Blumen gelb".

Orig. coll. in S: "Am Weinberge auf sandigen Stellen zwischen Gebüsch. Sept. 15.-26" (Holotype).

Mounted together with two collections of "*Moraea setifolia* Eckl.", all in a difficult mixture. According to P. Goldblatt this may also belong to the genus *Homeria*. The name is best treated as a nomen nudum.)

(*Wredowia pulchra* Eckl. (p. 16)

Descr.: "Blumen am trocknen Exemplar zinnoberfarben".

Orig. coll.: Not found in S.

This new monotypic genus was characterized by Ecklon as "Uebergang von *Sisyrinchium* in *Aristea*", which is, of course, no description. If the short diagnosis is accepted as sufficient for valid publication, however, the genus is also validated (cf. Art. 42 in the Code). However, the taxon was regarded by Baker (1892: 145, 1896: 55) as not described. Nowadays it is known as the monotypic *Pillansia templemannii* (Bak.) L.Bol. In agreement with Baker, I suggest that Ecklon's name is regarded as not validly published.)

Romulea parviflora Eckl. (p. 19)

Descr.: "Blume rosenroth klein".

Orig. coll. in S: "Feuchte Stellen der 1ten Höhe auf Grün Point. Sept. 17.-24" (Holotype).

In 1968 this specimen was determined by M. de Vos as *Romulea obscura* Klatt. Ecklon's name now takes precedence, and *R. obscura* Klatt goes into synonymy.

Geissorhiza rosea Eckl. (p. 20)

Descr.: There is no description, but since this is the only species under the heading, "Rosenrothe Blumen", it may be regarded as validly published.

Orig. coll. in S: "Ex Hort. Bot. Sept. 4.-26" (Lectotype). Mounted together with two other collections.

According to Baker (1896: 71) this is a synonym of *G. hirta* (Thunb.) Ker, which is in turn a synonym of *G. inflexa* (de la Roche) Ker var. *erosa* (Salisb.) Goldblatt (1970: 298).

Geissorhiza candida Eckl. (p. 21)

Descr.: Being the only species under the heading, "Weisse Blumen", it may with some hesitation be regarded as validly published.

Orig. coll. in S: "Hottentottsholland, Zeyher" (Holotype).

This species was not cited by Baker (1896), and its identity should be further investigated. It may prove to be *G. graminifolia* Baker, which will then go into synonymy.

(*Agretta pallideflavens* Eckl. (p. 24)

Descr.: "Blumenblätter inwendig und auswendig ganz gelb, Röhre ins weissliche fallend".

Orig. coll. in S: "Agretta [flavens delet.] pallideflavens E. Ixia [inserted: pallide] flavens E. Ex Hort Bot. Sept. 29.-26".

This species is provided with a sufficient diagnosis, but it is nevertheless not validly published, since the generic name *Agretta* was not validly published.)

Ixia punicea Eckl. (p. 24)

Descr.: "Blumenblätter inwendig und auswendig hochroth, unten mit einen kleinen grünen Stern versehen".

Orig. coll. in S: "Ex hort Bot. Sept. 20.-26" (Lectotype).

Lewis (1962: 192) regarded this as a nomen nudum and determined the specimen to *I. patens* Ait. The name is validly published, however, but it becomes illegitimate because of *I. punicea* Jacq. and *I. punicea* Spreng.

Ixia pulcherrima Eckl. (p. 24)

Descr.: "Blumenblätter hochroth glänzend".

Orig. coll.: Not found in S. Ecklon cites two collections, both from the botanical garden.

Lewis (1962: 91, 92, 127) regarded this as a nomen nudum and referring to two species, viz. *I. framesii* L. Bol. and *I. campanulata* Houtt. However, she probably saw none of the original specimens, and the identity of the species remains uncertain.

Ixia coccinea Eckl. (p. 24)

Descr.: "Blumenblätter dunkelroth mit scharlachrothen Streifen durchzogen, unten mit einen kleinen grünen Stern versehen."

Orig. coll.: Not found in S. Ecklon cites a collection from the botanical garden (A.d.b.g. Sept. 20.-26), which is thus the holotype. Ecklon added that he possessed another specimen without locality, collected by Brehm. This passage was misunderstood by Lewis, who stated: "Ecklon cited Brehm as the collector" (Lewis, 1962: 179). Lewis put the species among excluded species, and thought it might be *I. campanulata* Houtt. This remains to be proved.

At any rate, the name is a later homonym of *I. coccinea* Thunb. and thus illegitimate.

Ixia lutea Eckl. (p. 24)

Descr.: "Blumenblätter inwendig gelb, unten mit einer grossen radförmigen schwarzrothen Zeichnung, auswendig 3 blassgelb und 3 gelb, in's scharlachrothe fallend, nach unten zu bläulich. Die cultivierte Pflanze 2 Fuss hoch."

Orig. coll. in S: "Ex Hort. Bot. Sept. 20.-26" (Holotype).

By Lewis (1962: 123) said to be a nomen nudum and "almost certainly" a form of *I. conferta* Foster var. *ochroleuca* (Ker) Lewis. She did not examine the type, but her supposition seems to be correct. *I. lutea* Eckl. thus takes precedence over *I. conferta* Foster. The two varieties of this species will then have to be renamed *I. lutea* Eckl. var. *lutea* (syn. *I. conferta* Foster var. *ochroleuca* (Ker) Lewis) and *I. lutea* Eckl. var. *ovata* (Andr.) B. Nord., comb. nov. (basonym: *I. capitata* var. *ovata* Andr. Bot. Rep. t. 23, 1798).

Ixia pallide-flavens Eckl. (p. 25)

Descr.: "Bl.-Bl. inwendig blassgelb unten mit einer grossen dunkelschwarzen radförmigen Zeichnung auswendig blassgelb mit scharlachfarbenen Flecken unten grünlich grau. Die cultivierte Pflanze 2 Fuss hoch."

Orig. coll. in S: "Ex Hort. Bot. Sept. 20.-26" (Holotype).

Lewis evidently accepted this species as validly published, but she regarded its identity as uncertain and listed the species among the "Species excluded" (Lewis, 1962: 180). She noted that the species had been cited as a synonym of *I. curta* Andr. and *I. polystachya* L., and that a specimen in Geneva (G), named *I. pallide-flavens* Eckl., is *I. maculata* L. The holotype in my opinion combines characters from *I. maculata* and *I. monadelpha* de la Roche and is probably a garden hybrid.

Ixia flava Eckl. (p. 25)

Descr.: "Blumen-Blätter inwendig dunkelgelb auswendig etwas heller, Röhre dunkelroth."

Orig. coll. in S: "Ex Hort Ludwigi. Oct. 8.-26" (Holotype).

A later homonym of *I. flava* Lam. (= *Romulea bulbocodioides* fide Lewis 1962: 179) and *I. flava* Hornem. The identity of the latter is uncertain, but it has been cited as a synonym of *I. maculata* L. Lewis (l.c.) dismissed *I. flava* Eckl. as a nomen nudum and of uncertain identity. However, in 1961 Lewis had determined the type in S to *I. maculata* L., obviously without realizing its nomenclatural importance as a type specimen.

Thus *I. flava* Eckl. is an illegitimate name to be added to the synonyms of *I. maculata* L.

Ixia crocea Eckl. (p. 25)

Descr.: "Blumenblätter inwendig safranfarbig, unten mit einer grossen braunen radförmigen Zeichnung, auswendig safranfarbig, unten grünlich braun. Die ganze Pflanze 1 Fuss hoch."

Orig. coll. in S: "Ex Hort. Bot. Sept. 20.-26" (Holotype). Mounted together with two other collections by Ecklon, also named *I. crocea* by him (both from Oct. 1827). It may be difficult to sort out the original specimen from this mixture.

This name was overlooked by Lewis (1962) but Baker (1896: 8) mentioned it as a synonym of *I. maculata* L. It is antedated by *I. crocea* Thunb., which is in its turn a synonym of *Romulea triflora* (Burm.f.) N.E.Br. (fide Lewis 1962: 187).

Ixia vitellina Eckl. (p. 25)

Descr.: "Blumenblätter inwendig eiergelb, beinahe safrangelb wie *I. crocea*, nur etwas kleiner, unten mit einer schwarzbräunlichen, radförmigen Zeichnung, in der Mitte ein kleiner grünlich-gelber Stern, auswendig safranfarbig mit scharlachfarbenen Flecken, unten grünlich-grau. Etwas höher als *I. crocea* mit welcher sie am meisten Aehnlichkeit hat."

Orig. coll.: Not found in S.

By Lewis (1962: 195) in her index said to be = *I. maculata* L. but not cited among the synonyms of the latter in the text. Lewis evidently saw no type specimen, only a specimen in Geneva (G) named *I. vitellina* Eckl.

Ixia ochracea Eckl. (p. 25)

Descr.: "Blumenblätter ocherfarbengelb, inwendig mit schwarzen Flecken".

Orig. coll. in S: "Ex Hort. Bot. Sept. 10.-26" (Holotype).

Lewis (1962: 180, 191) regarded this as a nomen nudum and did not comment upon its identity. The original collection is mounted together with another specimen of unknown origin.

Ixia cana Eckl. (p. 26)

Descr.: "Blumenblätter inwendig blassgrau, unten mit einer grossen violetten radförmigen Zeichnung versehen, auswendig blassgrau, nach unten zu etwas grünlich."

Orig. coll. in S: "Ex Hort. Bot. Sept. 29. (sic!)-26" (Lectotype; Ecklon also mentions a spontaneous collection in Brehm's herbarium).

Lewis regarded this as a hybrid with *I. viridiflora* as one of the parents. She based this opinion on some specimens distributed as *I. cana* Eckl. by Ecklon. The type itself, however, was by Lewis in 1960 determined to *I. viridiflora*. Nevertheless this is also very likely a hybrid. The original material is

mounted together with one or two other specimens also named *I. cana* by Ecklon and perhaps descended from the same bulbs in the botanical garden.

Ixia alboflavens Eckl. (p. 27)

Descr.: "Blumenblätter inwendig gelbgrünlich-weiss, unten mit einer grossen schwarzbraunen, am Rande gelblichen radförmigen Zeichnung versehen, auswendig unten braun."

Orig. coll.: Not found in S.

Judging from other specimens distributed under this name, Lewis regarded this as *Ixia conferta* Foster var. *ochroleuca* (Ker) Lewis (cf. under *I. lutea* Eckl. above), and she took it to be a nomen nudum (Lewis 1962: 121, 185). Until a type specimen comes to light, *I. alboflavens* Eckl. may be cited with a question mark as a synonym of *I. lutea* Eckl.

Ixia alba Eckl. (p. 27)

Descr.: "Blumenblätter inwendig ganz weiss ohne Stern und Zeichnung".

Orig. coll. in S: "E H B. Oct. 8.-26" (Holotype). Mounted together with Ecklon & Zeyher 70.10., similarly named. Possibly the original specimens can be sorted out after a careful comparison with duplicates of the latter collection.

Lewis (1962: 96) regarded *I. alba* Eckl. as a nomen nudum and stated, that "Ecklon and Zeyher applied it to two different species". The two species concerned are *I. orientalis* L.Bol. and *I. odorata* Ker var. *hesperanthoides* Lewis. However, the name is clearly unambiguous, and the holotype was in 1961 by Lewis determined as *I. orientalis*. At any rate Ecklon's name is illegitimate because of *I. alba* L. (= *Gladiolus* sp.).

Sparaxis meleagris Eckl. (p. 27)

Descr.: "Blumenblätter bluthroth ins hochrothe fallend mit federartigen schwarzen Flecken geziert, inwendig unten gelb, auswendig unten etwas blässer".

Orig. coll.: Not found in S.

This species was not mentioned in Goldblatt's revision (1969). It is possibly a form of *S. grandiflora* (de la Roche) Ker.

Sparaxis violacea Eckl. (p. 27)

Descr.: "Blumen inwendig rothblau (veilchenfarbig) glänzend in der Mitte mit herzförmigen weissen Flecken bezeichnet, aussen von derselben Farbe nur 3 Blätter etwas heller".

Orig. coll.: Not found in S.

The species was accepted by Klatt, who described it more fully and also provided a Latin diagnosis (Klatt, 1882: 389). In the recent revision by Goldblatt (1969) this is *S. grandiflora* (de la Roche) Ker subsp. *violacea* (Eckl.) Goldblatt. The latter author designated the sheet Ecklon & Zeyher 114 in SAM as "lecto-

type". This is inadmissible, since in the original description only two collections from Ecklon's garden are cited. If no original material comes to light, the collection chosen by Goldblatt may be regarded as a neotype.

Sparaxis cana Eckl. (p. 28)

Descr.: "Blumenkrone inwendig unten mit einem gelblichen Sternchen und violetten Ecken im weissen Felde, oben blassgrau, nach der Mitte zu ins violette fallend, von den äussern Blumenblättern 3 aschgrau, 3 etwas blässer".

Orig. coll. in S: "Ex Hort. Ludwigii. Sept. 30.-26" (Holotype). In the text said to be collected in 1816, which is obviously a misprint for 1826.

Goldblatt did not mention this species in his revision (1969), but after examining the type he refers it to *S. grandiflora* (de la Roche) Ker subsp. *violacea* (Eckl.) Goldblatt. The colour and markings of the flower are very variable in the latter taxon.

Sparaxis lutea Eckl. (p. 28)

Descr.: "Nicht so hoch als die vorige¹, die Blumen sind beim Aufblühen gelb und bleiben gelb nach dem Trocknen".

Orig. coll. in S: "Ex Hort. Ludwigii. Sept. 20.-26" (Holotype).

This was with some hesitation cited by Goldblatt (1969: 245) in the synonymy of *S. grandiflora* (de la Roche) Ker subsp. *acutiloba* Goldblatt. He did not adopt Ecklon's name, because of the inadequate description and the apparent absence of type material.

The holotype deviates from typical *S. grandiflora* subsp. *acutiloba* by the branching, bulbil-bearing stem. In these respects the plant resembles *S. bulbifera* (L.) Ker, which, however, never has yellow flowers (Goldblatt, 1969: 239). After examining the type specimen, Goldblatt maintains his view, that *S. lutea* is a synonym of *S. grandiflora* subsp. *acutiloba*. The atypical appearance of the plant may be due to effects of cultivation.

Tritonia sanguinea Eckl. (p. 29)

Descr.: "Blumenblätter dunkelrosenroth ins blutrothe fallend, kleiner als *Tr. fenestrata* unten am Rande jedes Blumenblatts stark durchscheinend".

Orig. coll. in S: "E H B. Oct. 14.-26" (later added: "zu *securigera* ?") (Holotype).

Baker (1892: 190; 1896: 119) regarded this and the following species as colour varieties of *T. crocata* (L.) Ker.

Tritonia coccinea Eckl. (p. 29)

Descr.: "Blumenblätter orangefarben ins scharlachfarbene fallend, nur unten mit gelbem Stern und violetter, herzförmiger Zeichnung, der Rand wenig

¹Refers to *S. albiflora* Eckl., a superfluous name for *S. bulbifera* (L.) Ker.

durchsichtig, aussen orangefarben ins scharlachbläuliche fallend und unten weisslich. Mit *Tr. aurantiaca* am nächsten verwandt”.

Orig. coll.: Not found in S.

Tritonia aurantiaca Eckl. (p. 29)

Descr.: “Blume safranfarben etwas dunkler als *Tr. crocata*, unten weniger durchsichtig und jedes einzelne Blumenblatt, unten mit einer herzförmigen orangefarbenen Zeichnung versehen”.

Orig. coll.: Not found in S.

(*Freesea miniato-lateritia* Eckl., p. 30, is provided with a fairly lengthy description, but is nevertheless not validly published, since it was subordinate to a genus not validly published, viz. “*Freesea* Eckl.”; cf. Art. 43 of the Code.)

(*Babiana angustifolia* Eckl., p. 31, is a nomen nudum. It is also antedated by *B. angustifolia* Sweet (syn. *B. pulchra* (Salisb.) Lewis). The correct name of this taxon is *B. nana* (Andr.) Spreng. var. *maculata* (Klatt) B. Nord. See further Nordenstam, 1970: 442.)

Babiana lilacina Eckl. (p. 31)

Descr.: “Blumenblätter gleich lang, inwendig lilafarben und unten mit einem blauen Stern bezeichnet, auswendig etwas heller und nach unten zu ins Blaue fallend”.

Orig. coll.: Not found in S.

Lewis (1959: 53) cited this as a synonym of *B. plicata* Ker. She did not see the type, only other specimens named *B. lilacina* by Ecklon, but her interpretation seems quite acceptable.

Babiana stellata Eckl. (p. 32)

Descr.: “Blumenblätter lilafarben und regenbogenfarbig gesternt”.

Orig. coll. in S: “Ex Hort. Bot. Sept. 4.-26” (Holotype).

The specimen is difficult to determine; perhaps it is *B. angustifolia* Sweet (syn. *B. pulchra* (Salisb.) Lewis).

Babiana rosea Eckl. (p. 32)

Descr.: “Blumenblätter inwendig rosenroth, die äusseren blässer mit einem weissen Striche durchzogen. Nach dem Trocknen geht die schöne rosenrothe Farbe ins Blaue über.”

Orig. coll. in S: “Ex Hort Bot. Sept. 20.-26” (Holotype).

Lewis (1959) dismissed the species as a nomen nudum, and having seen no original specimens, she guessed that it might be *B. villosa* (Ait.) Ker var. *grandis*. Two collections are mixed on the sheet in S, but Lewis' suggestion appears plausible.

Babiana punicea Eckl. (p. 32)

Descr.: "Blumenblätter inwendig hochroth, die äusseren von derselben Farbe und 3 derselben mit einem dünnen ins gelbliche fallende Striche durchzogen."

Orig. coll. in S: "No. 2 am Sept. 10.-26. Ex Hort Bot. Sept. 20.-26" (Holotype).

Lewis in her revision (1959) listed the name in the synonymy of *B. villosa* (Ait.) Ker. without having seen the type. Her treatment is confirmed by a study of the type.

Babiana flavocaesia Eckl. (p. 32)

Descr.: "Blumenblätter inwendig gelblich-blaulich, unten dunkler gelb, auswendig 3 blasblau und 3 gelblich mit einem blassblauen Streifen durchzogen. Blätter breit."

Orig. coll. in S: "Aus der Gegend um Stellenbosch. Sept. 20.-26" (Holotype).

Lewis did not see any specimens named *B. flavocaesia* Eckl. but nevertheless concluded that the taxon referred to was *B. stricta* (Ait.) Ker var. *sulphurea* (Jacq.) Baker. Her supposition can now be confirmed.

Babiana caesia Eckl. (p. 32)

Descr.: "Blumenblätter gleich lang, inwendig weiss und unten mit blaulich rothen Flecken, auswendig hellblau, unten etwas dunkler, drei Blumenblätter eben ins gelbliche fallend. Blätter schmal und stark zugespitzt."

Orig. coll.: Not found in S.

Lewis (1959), without having traced the type, supposed this to be *B. stricta* (Ait.) Ker var. *erectifolia* (Lewis) Lewis.

Babiana atrocyanea Eckl. (p. 33)

Descr.: "Blume blau mit schwarzem Stern."

Orig. coll. in S: "Ex Hort Bot. Sept. 4.-26" (Holotype).

From the description Lewis (op. cit.) judged that this would be "*B. pulchra* (Salisb.) Lewis", the correct name of which is *B. angustifolia* Sweet (cf. Nordenstam, 1970: 440). The specimen is difficult to determine, but Lewis' suggestion seems plausible.

Babiana atrodeltoidea Eckl. (p. 33)

Descr.: "Blumenblätter gleich lang, inwendig schmalblau, unten etwas heller und mit einem dunklern sammetfarbenen Sterne gezeichnet, auswendig schmalblau nach unten zu ins rötliche fallend. Blätter schmal."

Orig. coll. in S: "Ex Hort Bot. Sept. 20.-26" (Lectotype; the other specimen cited by Ecklon is not present in S).

Lewis (op. cit.) guessed that also this name should be a synonym of *B. "pulchra"*, i.e. *B. angustifolia* Sweet. and I can now confirm her supposition.

Babiana reflexa Eckl. (p. 33)

Descr.: "Eine ausgezeichnete Art. Blumen blau, spiralförmig um den zurückgebogenen Blumenstiel gewunden."

Orig. coll. in S: (i) "Flor Afric austral. aus meinem Garten. Sept. 25." (Lectotype). (ii) "E H B. Oct. 14.-26" (Paratype).

This is a synonym of *B. secunda* (Thunb.) Ker and a later homonym of *B. reflexa* (Licht.) Ker.

Antholyza ludwigii Eckl. (p. 34)

Descr.: "Durch einen niedrigern Habitus, hervorstehende, blaulichschwarze Stamina und vorzüglich durch die verschiedene Blütezeit von der vorigen verschieden."

Orig. coll. in S: "Zwischen *A. praealta* und *A. nervosa*. Aus Herrn Ludwigs Garten, der Standort ist nicht bekannt. Dezember 17., 1826" (Holotype).

Baker did not cite this in 'Flora capensis', but he mentioned a *Watsonia ludwigii* Eckl. MS. as a synonym of *W. meriana* var. *roseo-alba* (Jacq.) Ker (Baker, 1896: 101). The type specimen is mounted together with Zeyher 4023, named *Watsonia ludwigii* Eckl.

Watsonia natalensis Eckl. (p. 34)

Descr.: "Corollis infundibuliformibus cernuis, laciniis ovatis mucronatis subringentibus, spathis corollae tubo brevioribus, foliis ensiformibus multinerviis." This is followed by a lengthy description, which it is not necessary to repeat in full here.

Orig. coll. in S: "Ex Horto quoque (von Farewells Kolonie an der Küste Natalis). November 1826" (Holotype).—See Fig. 2.

This species is now known as *Gladiolus natalensis* (Eckl.) Reinw.

Gladiolus thunbergii Eckl. (p. 37)

A nomen novum for *G. communis* Thunb. non L. and thus validly published. The identity of Ecklon's specimens so named is of no importance for the application of the name. The material belongs to *G. ornatus* Klatt (det. G. J. Lewis).

Gladiolus pilosus Eckl. (p. 38)

Descr.: "Blätter linienförmig, unten haarig, Blumenblätter wenig zugespitzt hellrosenroth, die untern etwas heller mit dunklern Flecken".

Orig. coll. in S: "Zwischen Gebüsch in der Fläche bei Weinberg. August" (Lectotype).



FIG. 2.

Holotype of *Watsonia natalensis* Eckl., now known as *Gladiolus natalensis* (Eckl.) Reinw., in the Museum of Natural History, Stockholm.

The label is probably of later date than the publication of Ecklon's "Verzeichniss". It is possible, however, that the specimen represents a part of the original collection although with a re-written label, and I choose this specimen as lectotype.

This species is also known as *G. villosus* Ker, but the correct name is *G. punctulatus* Schrank (Lewis, 1966: 291).

Gladiolus pendulus Mund ex Eckl. (p. 38)

Descr.: "Eine ausgezeichnete Art mit langen fadenförmigen, etwas spiralförmig gewundenen Blumenstielen und rothblaulichen Blumen".

Orig. coll. in S: "Zwiebeln aus der Gegend um Georgetown. A.d.b.G. Januar 7. 27" (Lectotype).

In the description the date of collecting is said to be Dec. 30, 1826. Either this is a mistake, or Ecklon made a second collection one week later in the garden, and for some reason the latter collection is not cited in the description. At any rate Ecklon must have had the specimen preserved in S available, when he wrote his manuscript, and it may be designated as lectotype.

The species is obviously a *Dierama*, no doubt *D. pendula* (L.f.) Baker.

Gladiolus versicolor Eckl. (p. 39)

Descr.: "Mit *Gl. tristis* verwandt. Die drei obern Blumenblätter haben inwendig schwarze Flecken und alle Blumenbl. sind auswendig schwarz gefleckt."

Orig. coll.: Ecklon mentions two collections from the botanical garden, but none of these was found in S.

The name is a later homonym of *G. versicolor* Andr.

Gladiolus similis Eckl. (p. 40)

Descr.: "Durch kleinere minder gefleckte blassere Blumen van *Gl. hirsutus* verschieden."

Orig. coll. in S: "Ex Hort. Ludwigii. Sept. 5-26" (Lectotype; the other specimen mentioned by Ecklon was not found in S).

According to an annotation by Lewis in 1965 the type specimen is *G. caryophyllaceus* (Burm.f.) Poir.

Gladiolus miniatus Eckl. (p. 40)

Descr.: "Schaft 1 Fuss hoch zweimal so lang als die Blätter zurückgebogen 4-blumig. Blumenscheiden halb so lang als die Blumen. Blumenbl. gleichlang, das obere etwas weniger grösser, inwendig gelb ins mennigfarbene fallend, jedes mit einem braunen Streifen von unten nach oben durchzogen; auswendig die Röhre unten hochroth, die Blumenbl. nach oben zu von derselben Farbe als inwendig."

Orig. coll. in S: "Von einem Zwiebel den ich von einer getrockneten Pflanze abschnitt, die ich an bergigten Stellen zwischen Hottentottshollandskloof und Hauhoek sammelte in Nov. 25". The labels (Fig. 1) match the text of the published description. On the sheet are mounted three specimens. Probably the right hand specimen is intended, and I designate this as lectotype. The two left hand specimens probably belong to another label, according to which they were collected in the garden on Oct. 17, 1827, thus after the publication of Ecklon's "Verzeichniss".

LIST OF ECKLON'S *NOMINA NUDA*

As mentioned in the introduction, the majority of Ecklon's names are not validly published. However, several of them have been cited by later authors, and a few have even been treated as validly published. A list of these names and, wherever possible, their true identity, may therefore be useful. The nomina nuda are either names published without a diagnosis, or they are provided with a brief descriptive remark, which is regarded as insufficient to differentiate the species from its congeners. The list also includes species, which are invalid, because they were published under generic names, not validly published. An asterisk denotes that original material, i.e. collection cited in Ecklon's publication, is preserved in the Museum of Natural History, Stockholm (S). Some colleagues have been most helpful in assigning correct names to these specimens. I especially want to thank Dr. Peter Goldblatt, Cape Town, and Miss Mary Thompson, Stellenbosch. Their names will be abbreviated below as P.G. and M.T., respectively.

Drimia humilis C. H. Bergius ex Eckl. (p. 2)

Eriospermum spirale C. H. Bergius ex Eckl. (p. 2) (Later validly published as

E. spirale C. H. Bergius ex Schultes in Roemer & Schultes, 1830)

Forbesia Eckl. (p. 4)

F. plicata (L.) Eckl. (p. 4) (Based on *Hypoxis plicata* L., but combination not validly published; cf. Art. 43 in the Code)

**F. angustifolia* Eckl. (p. 5) = *Curculigo plicata* (L.f.) Ait. (syn. *Empodium plicatum* (L.f.) Salisb.; conf. M.T.)

**Ornithogalum palustre* Eckl. (p. 6) = *O. thyrsoides* Jacq. (det. M.T.)

**Androcymbium littorale* Eckl. (p. 7)

**A. cuculatum* (sic!) Eckl. (p. 7) (Ecklon lists two further species of this genus, viz. *eucomoides* and *leucanthum*. Unfortunately, all four collections are mounted together on one sheet. It seems impossible to connect labels and specimens, and the identity of the two nomina nuda remains obscure.)

**Brunsvigia albiflora* Eckl. (p. 7) = *Crinum latifolium* L. (The specimen looks more like this East Asiatic species than any of the Cape Crinums. It is most likely a garden plant.)

- **Hypoxis geniculata* Eckl. (p. 9) = *Spiloxene capensis* (L.) Garside
- **H. acuminata* Eckl. (p. 9) = *Spiloxene capensis* (L.) Garside
- **H. laxa* Eckl. (p. 9) = *Spiloxene capensis* (L.) Garside
- **H. flavescens* Eckl. (p. 9) = *Spiloxene capensis* (L.) Garside
- **H. longifolia* Eckl. (p. 9) = *Spiloxene capensis* (L.) Garside (conf. M.T.)
- **H. aurea* Eckl. (p. 10) = *Spiloxene capensis* (L.) Garside (conf. M.T.)
- **H. tenuifolia* Eckl. (p. 10) = *Spiloxene capensis* (L.) Garside
- **H. juncea* Eckl. (p. 10) = *Spiloxene capensis* (L.) Garside (conf. M.T.)
- **H. luzulaefolia* Eckl. (p. 10) = *Spiloxene serrata* (Thunb.) Garside (conf. M.T.)
(On one sheet mixed with *S. capensis*)
- **H. flavoptetala* Eckl. (p. 10) = probably a small, unspotted form of *Spiloxene capensis* (L.) Garside (det. M.T.)
- **H. filifolia* Eckl. (p. 10) (Ecklon's collection from Table Mountain is mounted together with two collections from Caledon Division. No less than four species are represented on the sheet, however, and the identity of Ecklon's name is uncertain. The four species are *Spiloxene capensis*, *declinata*, *schlechteri* and *serrata*. All but *S. declinata* occur on the Peninsula.)
- **H. tabularis* Eckl. (p. 10) = *Spiloxene schlechteri* (Bol.) Garside (det. M.T.)
- H. minor* Eckl. (p. 10)
- H. spathacea* Eckl. (p. 11)
- **Viesseuxia rivularis* Eckl. (p. 11) = *Moraea vegeta* L. (det. P.G.)
- **V. intermedia* Eckl. (p. 12) = *Moraea papilionacea* (L.f.) Ker (det. P.G.)
- **V. nervosa* Eckl. (p. 12) = *Moraea papilionacea* (L.f.) Ker (det. P.G.)
- **V. Brehmii* Eckl. (p. 12) = *Moraea gawleri* Spr. (det. P.G.)
- **V. angustifolia* Eckl. (p. 12) = *Moraea gawleri* Spr. (det. P.G.)
- **V. multifolia* Eckl. (p. 12) = *Homeria* sp. (det. P.G.)
- **V. geniculata* Eckl. (p. 12) = *Moraea mira* Klatt (det. P.G.)
- **V. multiflora* Eckl. (p. 12)
- V. collina* Eckl. (p. 12)
- V. pauciflora* Eckl. (p. 12)
- V. gracilis* Eckl. (p. 12)
- **V. aurantiaca* Eckl. (p. 13) = *Moraea insolens* Goldbl. MS. (det. P.G.)
- V. tabularis* Eckl. (p. 13)
- **V. curvata* Eckl. (p. 13) = ? (Material inadequate; cf. p. 281)
- **V. grandiflora* Eckl. (p. 14) = *Moraea* cf. *angusta* (L.f.) Ker (det. P.G.)
- **V. plumaria* Eckl. (p. 14) = *Moraea angusta* (L.f.) Ker (det. P.G.) (Probably this was intended as a new name, rather than a new combination of the older *Iris plumaria* Thunb. The author quotation "Eckl." is missing in the publication, but it occurs on the label to the original specimen.)
- V. edulis* Eckl. (p. 14)
- V. longifolia* Eckl. (p. 14)

- **V. lutea* Eckl. (p. 14) = *Moraea angusta* (L.f.) Ker (det. P.G.)
Freuchenia Eckl. (p. 14)
- **F. bulbifera* Eckl. (p. 14) = *Moraea ramosissima* (L.f.) Druce (det. P.G.)
- **Moraea multiflora* Eckl. (p. 14) = cf. *Homeria* sp. (det. P.G.; material inadequate)
- M. setifolia* Eckl. (p. 14)
- **M. pauciflora* Eckl. (p. 14) = cf. *Homeria* sp. (det. P.G.)
- **M. aurantiaca* Eckl. (p. 15) = *Homeria ochroleuca* Salisb. (det. P.G.)
- **M. similis* Eckl. (p. 15) = cf. *Homeria* sp. (possibly *H. collina* (Thunb.) Vent.; cf. p. 282)
- **M. humilis* Eckl. (p. 15) = *Gynandris setifolia* (L.f.) Foster (det. P.G.)
- **Sisyrinchium inundatum* Eckl. (p. 16) = *Cleanthe bicolor* Salisb. (det. H. Weimarck)
- **S. grandiflorum* Eckl. (p. 16) = *Aristea spiralis* (L.f.) Ker (det. H. Weimarck)
- Wredowia* Eckl. (p. 16) = *Pillansia* L. Bol.
W. pulchra Eckl. (p. 16) = *Pillansia templemannii* (Bak.) L. Bol. (cf. p. 282)
- **Aristea juncifolia* Eckl. (p. 16) = *A. racemosa* Bak. var. *inflata* H. Weim. (det. H. Weimarck)
- **A. umbellata* Eckl. (p. 16) = *A. schizolaena* Harv.? (det. H. Weimarck, but the locality is wrong for this species; the sheet bears also a specimen of *A. pusilla* (Thunb.) Ker)
- **A. diffusa* Eckl. (p. 16) = *A. pauciflora* W.-Dod (det. H. Weimarck)
- **A. intermedia* Eckl. (p. 16) = *A. dichotoma* (Thunb.) Ker (det. H. Weimarck)
- Galaxia violacea* Eckl. (p. 17)
- **Ferraria major* Eckl. (p. 18) = *F. cf. undulata* L. (det. P.G.)
- Romulea vulgaris* Eckl. (p. 18)
- R. tabularis* Eckl. (p. 18)
- R. arenaria* Eckl. (p. 18)
- **R. zeyheri* Eckl. (p. 19) = *Geissorhiza secunda* Ker (det. M. de Vos)
- **R. hirsuta* Eckl. (p. 19) = *R. hirsuta* (Klatt) Bak. (det. M. de Vos)
- R. ramosa* Eckl. (p. 19)
- **R. similis* Eckl. (p. 19) = *R. flava* (Lam.) de Vos var. *viridiflora* (Berg.) de Vos (det. M. de Vos)
- **Geissorhiza cyanea* Eckl. (p. 20) = *G. rochensis* Ker (det. P.G.)
- **G. nigro-montana* Eckl. (p. 21) = *G. pusilla* (Andr.) Klatt (det. P.G.)
- **G. aurea* Eckl. (p. 21) = *G. cf. bicolor* (Thunb.) N.E.Br. (det. P.G.)
- G. lutea* Eckl. (p. 21)
- **G. Brehmii* Eckl. (p. 21) = *G. imbricata* (de la Roche) Ker var. *brehmii* (Eckl. ex Klatt) Foster (det. P.G.)
- **G. romuleoides* Eckl. (p. 21) = *G. ornithogaloides* Klatt (det. P.G.)
- **G. striata* Eckl. (p. 21) = *G. imbricata* (de la Roche) Ker (1 specimen, mounted

together with specimens of *G. humilis* (Thunb.) Ker, leg. Sieber, Fl. Cap. Nro. 395)

G. arenaria Eckl. (p. 21)

**G. tenuis* Eckl. (p. 22) = *G. humilis* (Thunb.) Ker (det. P.G.)

**G. setifolia* Eckl. (p. 22) = *G. juncea* (Link) A. Dietr. (det. P.G.)

Weihea Eckl. (p. 22)

W. excisa (L.) Eckl., non rite publ. (p. 22)

W. elatior Eckl. (p. 22)

Hesperantha crispa Eckl. (p. 22)

H. maritima Eckl. (p. 23)

H. pallida Eckl. (p. 23)

**H. ramosa* Eckl. (p. 23) = *Geissorhiza* cf. *juncea* (Link) A. Dietr. var. *pallidiflora* (Schltr) Foster (det. P.G.)

**H. quinquangularis* Eckl. (p. 23) = *Geissorhiza inflexa* (de la Roche) Goldbl. (det. P.G.)

H. setacea Eckl. (p. 23)

Agretta Eckl. (p. 23)

A. grandiflora Eckl. (p. 23)

A. stricta Eckl. (p. 23)

A. pentandra (L.f.) Eckl., non rite publ. (p. 23)

A. crispa (L.f.) Eckl., non rite publ. (p. 24)

**A. pallideflavens* Eckl. (p. 24) = *Ixia odorata* Ker var. *hesperanthoides* Lewis (det. P.G.) (In spite of the diagnosis, the name is not validly published, being subordinate to a genus not validly published; cf. p. 283)

**Ixia palliderosea* Eckl. (p. 24) = *I. patens* Ait. (det. G. J. Lewis)

I. angustifolia Eckl. (p. 25)

I. flavescens Eckl. (p. 26)

I. flavovirens Eckl. (p. 26)

**I. caeruleascens* Eckl. (p. 26) = *I. versicolor* Lewis (det. G. J. Lewis)

I. dubia Eckl. (p. 26)

**I. campanuloides* Eckl. (p. 26) = probably a hybrid of *I. viridiflora* Lam. (det. G. J. Lewis)

**I. lilacina* Eckl. (p. 27) = *I. polystachya* L. (det. G. J. Lewis)

Sparaxis luteoviolacea Eckl. (p. 27)

Tritonia dubia Eckl. (p. 30)

Freesea Eckl. (p. 30)

**F. miniatolateritia* Eckl. (p. 30) = *Ixia framesii* L. Bol. (det. P.G.) (In spite of the diagnosis this was not validly published, since the genus was not validly published. See also p. 288 and Brown, 1935:1)

F. longiflora (Ker) Eckl., non rite publ. (p. 30)

F. flava Eckl. (p. 30)

- **F. secunda* Eckl. (p. 30) = *Tritonia flabellifolia* (de la Roche) Lewis (det. P.G.)
F. crispa (Ker) Eckl., non rite publ. (p. 30)
- **Lapeirousia azurea* Eckl. (p. 31) = *L. corymbosa* (L.) Ker (det. P.G.)
Babiana angustifolia Eckl. (p. 31) = *B. nana* (Andr.) Spr. var. *maculata* (Klatt)
 B. Nord. (cf. p. 288 and Nordenstam, 1970: 442)
B. caerulescens Eckl. (p. 32)
- **Watsonia tabularis* Eckl. (p. 35) = *W. tabularis* Mathews & L. Bol. (det. P.G.)
W. iridifolia Eckl. (p. 35)
- **W. merianella* Eckl. (p. 36) = *W. humilis* Mill. (det. P.G.)
- **W. dubia* Eckl. (p. 36) = *W. dubia* Eckl. ex Klatt (det. P.G.)
W. pellucida Eckl. (p. 36)
- **W. tubulosa* Eckl. (p. 36) = *W. aletroides* Ker (det. P.G.)
- **W. pottbergensis* Eckl. (p. 36) = *W. stenosphon* L. Bol. (det. P.G.)
W. tigrina Eckl. (p. 36)
- Neuberia* Eckl. (p. 37)
N. marginata (L.f.) Eckl., non rite publ. (p. 37)
N. humilis Eckl. (p. 37)
- **N. longifolia* Eckl. (p. 37) = a mixture of *Gladiolus kirkii* Bak. and *Watsonia* cf. *longifolia* Mathews & L. Bol. (det. G. J. Lewis). The locality is wrong for the former species, so probably only the pieces of the latter species (a few leaves) are connected with the label.
- N. rosea* Eckl. (p. 37)
N. pyramidalis Eckl. (p. 37)
- **Gladiolus setifolius* Eckl. (p. 37) = *G. gracilis* Jacq. (det. P. G. and T. T. Barnard)
- **G. tabularis* Eckl. (p. 38) = *G. pappei* Bak. (det. P. G. and T. T. Barnard)
- **G. costatus* Eckl. (p. 38) = *Engysiphon schinzii* (Bak.) Lewis (det. G. J. Lewis)
G. adenandriflorus Eckl. (p. 38)
- **G. zeyheri* Eckl. (p. 38) = *G. punctulatus* Schrank (det. G. J. Lewis)
- **G. aghullensis* Eckl. (p. 41), according to T. T. Barnard = the Agulhas form of *G. miniatus* Eckl.
- **G. speciosus* Eckl. (p. 41) = *G. cardinalis* Curt. (conf. P. G. and T. T. Barnard)
- **G. dubius* Eckl. (p. 41) = *G. blandus* Ait. (which is almost certainly a form of *G. carneus* de la Roche, fide G. J. Lewis; see also Goldblatt, 1970:311)
- **Hebea bicolor* Eckl. (p. 42) = *Gladiolus virescens* Thunb. (det. G. J. Lewis)
 (Mounted with a collection of *G. venustus* Lewis, leg. Ecklon & Zeyher)
- H. zeyheri* Eckl. (p. 42)
- **H. ramosa* Eckl. (p. 43) = *Tritoniopsis ramosa* (Eckl. ex Klatt) Lewis (det. G. J. Lewis)
- Beilia* Eckl. (p. 43)

**B. triticea* (Thunb.) Eckl., non rite publ. (p. 43). Ecklon's material is *Thereianthus bracteolatus* (Lam.) Lewis (det. P.G.)

B. spicata (L.) Eckl., non rite publ. (p. 43)

Micranthus plantagineus Eckl. (p. 43). This has generally been regarded as a new combination of either *Ixia plantaginea* Ait. or *Gladiolus plantagineus* Pers. (see e.g. Baker, 1892: 179, 1896: 97, Lewis, 1950: 240, 1962: 192). However, there is no reference to earlier publications, and hence the name cannot be regarded as validly published.

**M. alopecuroideus* Eckl. (p. 43) = *M. plantagineus* (Ait.) "Eckl." (det. P.G.)

**M. fistulosus* Eckl. (p. 44) = *M. tubulosus* (Burm.f.) N.E.Br. (det. P.G.)

REFERENCES

- BAKER, J. G. 1878. Systema iridacearum. *Jl Linn. Soc. Bot.* **16**: 92–98.
 ——— 1892. *Handbook of the Irideae*. London: George Bell & Sons.
 ——— 1896. Irideae, in Thiselton-Dyer, *Flora capensis*, **6**: 7–171. London: L. Reeve & Co.
 BROWN, N. E. 1935. Freesia, Klatt, and its history. *Jl S. Afr. Bot.* **1**: 1–31.
International Code of Botanical Nomenclature. 1972. Utrecht.
 ECKLON, C. F. 1827. *Topographisches Verzeichniss der Pflanzensammlung von C. F. Ecklon*. Esslingen.
 ECKLON, C. F. & ZEYHER, C. 1834–37. *Enumeratio plantarum africae australis extratropicae*, 1–3. Hamburg.
 GOLDBLATT, P. 1969. The genus Sparaxis. *Jl S. Afr. Bot.* **35**: 219–252.
 ——— 1970. The Iridaceae of Daniel de la Roche. *Jl S. Afr. Bot.* **36**: 291–318.
 KLATT, F. W. 1882. Ergänzungen und Berichtigungen zu Baker's Systema Iridacearum. *Abh. Naturf. Ges. Halle* **15**: 335–404.
 LEWIS, G. J. 1950. Iridaceae, in Adamson & Salter, *Flora of the Cape Peninsula*: 217–264. Cape Town and Johannesburg: Juta & Co.
 ——— 1959. The genus Babiana. *Jl S. Afr. Bot., Suppl. Vol.* **3**.
 ——— 1962. The genus Ixia. *Jl S. Afr. Bot.* **28**: 45–195.
 ——— 1966. Thunberg's South African species of Gladiolus—four name changes. *Bot. Notiser* **119**: 286–296.
 MACOWAN, P. 1887. Personalia of botanical collectors at the Cape. *Trans. S. Afr. Phil. Soc.* **4**: xxx–liii.
 NORDENSTAM, B. 1970. Notes on South African Iridaceae: Lapeirousia and Babiana. *Bot. Notiser* **123**: 433–443.
 ROEMER, J. J. & SCHULTES, J. A. 1817. *Caroli a Linné equitis Systema vegetabilium secundum classes ordines genera species*, 1. Stuttgart.
 ——— 1830. *Ibid.* 7, 2. Stuttgart.